INDEX TO AUTHORS

A

Abramowitz, A. A. Purification of the chromatophorotropic hormone of the crustacean eyestalk, 501

Almquist, H. J. See *Klose and Almquist,* 469

Antopol, William, and **Glick, David.** Studies in histochemistry. XV. The histological distribution of choline esterase in the adrenal gland, 669

Astwood, E. B. See *Talbot, Lowry, and Astwood,* 1

B

Baker, Zelma, and **Miller, Benjamin F.** Studies on the metabolism of creatine and creatinine. III. Formation of creatine by isolated rat tissues, 233

Barron, E. S. Guzman. See *Lyman and Barron,* 293

Bergmann, Max. See *Fruton, Irving, and Bergmann,* 465

Bergmann, Werner. The splitting of digitonides, 471

Bernhart, F. W. Molecular weight of egg albumin, 189

Bibler, Walter G. See *Eichelberger and Bibler,* 645

Bischoff, Fritz. The picric acid and picrolonic acid precipitates of gonadotropic extracts, 35

Black, Simon, Frost, D. V., and **Elvehjem, C. A.** The relation of vitamin B_6 and pantothenic acid to factor W studies, 65

Bloor, W. R. Inheritance effect of exercise on the phospholipid and cholesterol content of muscle, 77

Borsook, Henry, and **Dubnoff, Jacob W.** The biological synthesis of hippuric acid *in vitro,* 307

— and —. The formation of creatine from glycocyamine in the liver, 559

Bowers, Russell V., Outhouse, Edgar L., and **Forbes, J. C.** Phosphatase studies: the hydrolysis of aminoethylphosphate and β-glycerophosphate by fecal and kidney phosphatase, 675

Brown, R. A. See *Emmett, Brown, and Kamm,* 467

Burton, Irving F. See *Cahill and Burton,* 161

Butler, Allan M. See *Talbot, Butler, and MacLachlan,* 595

C

Cahill, William M., and **Burton, Irving F.** Racemization of amino acids and dipeptides on acetylation with ketene, 161

Carne, Herbert O. See *MacKay, Wick, and Carne,* 613

Chaikoff, I. L. See *Fries, Changus, and Chaikoff,* 23

Changus, G. W. See *Fries, Changus, and Chaikoff,* 23

Chen, Yen Ping, Freeman, Smith, and **Ivy, A. C.** The preparation of a concentrated fecal phosphatase and its effect on dogs and rats, 445

Christensen, Bert E. See *West, Christensen, and Rinehart,* 681

Clutton, Roger F., Schoenheimer, Rudolf, and **Rittenberg, D.** Studies in protein metabolism.

XII. The conversion of ornithine into arginine in the mouse, 227

Connor, Edwin B. See *Kaye, Leibner, and Connor,* 195

Consolazio, W. V., and **Talbott, John H.** The determination of total base in biological material by electrodialysis, 753

Coolidge, Thomas B. Chemistry of the van den Bergh reaction, 119

Coryell, Charles D., and **Pauling, Linus.** A structural interpretation of the acidity of groups associated with the hemes of hemoglobin and hemoglobin derivatives, 769

D

Deuel, Harry J., Jr. See *Halliday, Deuel, Tragerman, and Ward,* 171

Dorfman, Ralph I. Conversion of etioallocholan-3,17-dione into androsterone, 457

Dubnoff, Jacob W. See *Borsook and Dubnoff,* 307, 559

DuBois, K. P. See *Moxon, Schaefer, Lardy, DuBois, and Olson,* 785

Dubos, René J. See *Hotchkiss and Dubos,* 791, 793

E

Eichelberger, Lillian, and **Bibler, Walter G.** Water and electrolyte content of normal and hydronephrotic kidneys, 645

Elvehjem, C. A. See *Black, Frost, and Elvehjem,* 65

Embree, Norris D., and **Shantz, Edgar M.** Cyclization of vitamin A_2, 619

Emmett, A. D., Brown, R. A., and **Kamm, Oliver.** Comparison of the antihemorrhagic activity of natural and synthetic vitamin K_1 with the proposed standard 2-methyl-1,4-naphthoquinone, 467

F

Field, J. Thomas, and **Poe, Charles F.** A biochemical study of the fermentation of rare sugars by members of the colon and *aerogenes* groups of bacteria. III. *d*-Fucose, 473

Fisher, R. B., and **Wilhelmi, A. E.** Observations on the relation of urea and glycine to creatine synthesis, 135

Forbes, J. C. See *Bowers, Outhouse, and Forbes,* 675

Fourt, Lyman. See *Harkins, Fourt, and Fourt,* 111

Fourt, Priscilla Chinn. See *Harkins, Fourt, and Fourt,* 111

Freeman, Smith. See *Chen, Freeman, and Ivy,* 445

Fries, B. A., Changus, G. W., and **Chaikoff, I. L.** Radioactive phosphorus as an indicator of phospholipid metabolism. IX. The influence of age on the phospholipid metabolism of various parts of the central nervous system of the rat. The comparative phospholipid activity of various parts of the central nervous system of the rat, 23

Frost, D. V. See *Black, Frost, and Elvehjem,* 65

Fruton, Joseph S., Irving, George W., Jr., and **Bergmann, Max.** The specificity of proteolytic enzymes from tumors, 465

G

Gavin, Gertrude, and **McHenry, E. W.** The B vitamins and fat metabolism. III. The effects of vitamin B_6 upon liver and body fat, 41

Glick, David. See *Antopol and Glick,* 669

Goodhart, Robert, and **Sinclair, H. M.** Deficiency of vitamin B_1 in man as determined by the blood cocarboxylase, 11

Grayman, Isabelle. See *Nelson, Grayman, and Mirsky,* 711

Greengard, Harry, and **Woolley, Jean Rea.** Studies on colloidal sulfur-polysulfide mixture. Absorption and oxidation after oral administration, 83

Griffith, Wendell H. Choline metabolism. III. The effect of cystine, fat, and cholesterol on hemorrhagic degeneration in young rats, 639

— and **Wade, Nelson J.** Choline metabolism. II. The interrelationship of choline, cystine, and methionine in the occurrence and prevention of hemorrhagic degeneration in young rats, 627

György, Paul, Poling, C. E., and **Subbarow, Yellapragada.** Observations on the factor curative of nutritional achromotrichia, 789

H

Hald, Pauline M. See *Solomon, Hald, and Peters,* 723

Halliday, Nellie, Deuel, Harry J., Jr., Tragerman, L. J., and **Ward, W. E.** On the isolation of a glucose-containing cerebroside from spleen in a case of Gaucher's disease, 171

Hanke, Martin E. See *Kendrick and Hanke,* 739

Harkins, William D., Fourt, Lyman, and **Fourt, Priscilla Chinn.** Immunochemistry of catalase. II. Activity in multilayers, 111

Harris, Robert L., and **Mattill, H. A.** The effect of hot alcohol on purified animal proteins, 477

Hastings, A. Baird. See *Kiese and Hastings,* 267, 281

Hogan, Albert G., and **Parrott, Ernest M.** Anemia in chicks caused by a vitamin deficiency, 507

Hotchkiss, Rollin D., and **Dubos, René J.** Chemical properties of bactericidal substances isolated from cultures of a soil bacillus, 793

— and —. Fractionation of the bactericidal agent from cultures of a soil bacillus, 791

I

Irving, George W., Jr. See *Fruton, Irving, and Bergmann,* 465

Ivy, A. C. See *Chen, Freeman, and Ivy,* 445

J

Jensen, H., and **Tolksdorf, Sibylle.** The effect of picric and flavianic acids on the potency of the follicle-stimulating anterior pituitary hormone, 519

Johnson, J. M. A comparison of the optical forms of glutamic acid from normal and cancerous tissue, 781

K

Kamm, Oliver. See *Emmett, Brown, and Kamm,* 467

Kaye, Irving A., Leibner, I. Wallace, and **Connor, Edwin B.** Apparatus for the continuous drying and extraction of biological materials. Application to the extraction of the neutral fat fraction of feces, 195

Kendrick, A. B., and **Hanke, Martin E.** The effect of iodine and mercury on amino nitrogen values with nitrous acid, 739

Kerr, Stanley E. The determination of purine nucleotides and nucleosides in blood and tissues, 147

Keys, Ancel. A rapid micro-Kjeldahl method, 181

Kiese, Manfred, and **Hastings, A. Baird.** The catalytic hydration of carbon dioxide, 267

— and —. Factors affecting the activity of carbonic anhydrase, 281

Klose, A. A., and **Almquist, H. J.** Synthesis of vitamin K_1, 469

Koehn, C. J., and **Sherman, W. C.** The determination of vitamin A and carotene with the photoelectric colorimeter, 527

Kramer, Benjamin. See *Sobel, Yuska, Peters, and Kramer,* 239

L

Lardy, H. A. See *Moxon, Schaefer, Lardy, DuBois, and Olson,* 785

Larsen, Junius, and **Poe, Charles F.** The solubility of pancreatic amylase in some organic solvents, 129

Lavin, G. I. See *White and Lavin,* 717

Leibner, I. Wallace. See *Kaye, Leibner, and Connor,* 195

LePage, G. A. See *Pett and LePage,* 585

Leva, Ernst. A colorimetric micromethod for the determination of sodium with manganous uranyl acetate, 487

Lowry, Oliver H. See *Talbot, Lowry, and Astwood,* 1

Lukens, Francis D. W. See *Stadie, Lukens, and Zapp,* 393

—. See *Stadie, Zapp, and Lukens,* 411, 423

Lyman, Carl M., and **Barron, E. S. Guzman.** Studies on biological oxidations. XII. Oxidations and carbohydrate synthesis in nephritic kidney slices, 293

M

MacKay, Eaton M., Wick, Arne N., and **Carne, Herbert O.** Relative amount of hepatic glycogen deposited by glucose, glycine, and *dl*-alanine, 613

Mackinney, G. Criteria for purity of chlorophyll preparations, 91

MacLachlan, E. See *Talbot, Butler, and MacLachlan,* 595

Mangun, George H. See *Myers and Mangun,* 701

Manning, P. D. V. See *Stokstad, Manning, and Rogers,* 463

Matlack, M. B., and **Tucker, I. W.** An esterase from muscular tissue, 663

Mattill, H. A. See *Harris and Mattill,* 477

McFarlane, W. D. See *Shaw and McFarlane,* 387

McHenry, E. W. See *Gavin and McHenry,* 41

McShan, W. H., and **Meyer, Roland K.** The relation of the follicle-stimulating activity of fresh pituitary tissue to the action of the enzymes contained in the tissue, 783

Meyer, Roland K. See *McShan and Meyer,* 783

Miller, Benjamin F. See *Baker and Miller,* 233

Mirsky, I. Arthur. See *Nelson, Grayman, and Mirsky,* 711

Moxon, Alvin L., Schaefer, A. E., Lardy, H. A., DuBois, K. P., and **Olson, O. E.** Increasing the rate of excretion of selenium from selenized animals by the administration of *p*-bromobenzene, 785

Moyer, Elsie Z. See *Moyer and Moyer,* 357, 373

Moyer, Laurence S., and **Moyer, Elsie Z.** Electrokinetic aspects of surface chemistry. VI. The interaction of gelatin with casein and egg albumin at surfaces, 357
— and —. VII. The electrophoretic behavior of microscopic particles in the presence of horse, human, or rabbit serum, 373
Myers, Victor C., and **Mangun, George H.** Comparative studies on creatine, phosphorus, and potassium in various muscle tissues, 701

N

Nelson, Norton, Grayman, Isabelle, and **Mirsky, I. Arthur.** The utilization of acetone bodies. III. The influence of adrenalectomy, 711
Norris, Earl R. See *Troescher and Norris*, 553
North, H. B. See *Pfiffner and North*, 459, 461

O

Olson, O. E. See *Moxon, Schaefer, Lardy, DuBois, and Olson*, 785
Outhouse, Edgar L. See *Bowers, Outhouse, and Forbes*, 675

P

Parrott, Ernest M. See *Hogan and Parrott*, 507
Pauling, Linus. See *Coryell and Pauling*, 769
Pearlman, W. H., and **Wintersteiner, O.** Estrogens with oxygen in Ring B. II. Δ_6-Isoequilin from 7-hydroxyestrone, 605
Peters, David D. See *Sobel, Yuska, Peters, and Kramer*, 239
Peters, John P. See *Solomon, Hald, and Peters*, 723
Pett, L. B., and **LePage, G. A.** Vitamin A deficiency. III. Blood analysis correlated with a visual test, 585
Pfiffner, J. J., and **North, H. B.** 17-β-Hydroxyprogesterone, 459
— and —. A new adrenal base, 461
Platz, Blanche R. See *Schneider, Steenbock, and Platz*, 539
Poe, Charles F. See *Field and Poe*, 473
—. See *Larsen and Poe*, 129
Poling, C. E. See *György, Poling, and Subbarow*, 789

R

Riemenschneider, R. W. See *Wheeler, Riemenschneider, and Sando*, 687
Rinehart, Robert E. See *West, Christensen, and Rinehart*, 681
Rittenberg, D. See *Clutton, Schoenheimer, and Rittenberg*, 227
Rogers, R. E. See *Stokstad, Manning, and Rogers*, 463
Rosner, Lawrence. The reaction between iodoacetic acid and denatured egg albumin, 657
Rusk, Howard A. See *Weichselbaum, Somogyi, and Rusk*, 343

S

Sando, Charles E. See *Wheeler, Riemenschneider, and Sando*, 687
Schaefer, A. E. See *Moxon, Schaefer, Lardy, DuBois, and Olson*, 785
Schneider, H., Steenbock, H., and **Platz, Blanche R.** Essential fatty acids, vitamin B_6, and other factors in the cure of rat acrodynia, 539
Schoenheimer, Rudolf. See *Clutton, Schoenheimer, and Rittenberg*, 227

Seraidarian, Krikor. See *Kerr,* 147

Shantz, Edgar M. See *Embree and Shantz,* 619

Shaw, J. L. D., and **McFarlane, W. D.** A critical study of the *p*-dimethylaminobenzaldehyde method for determining tryptophane as contrasted with the glyoxylic acid method, 387

Sherman, W. C. See *Koehn and Sherman,* 527

Sinclair, H. M. See *Goodhart and Sinclair,* 11

Sizer, Irwin W. The activation energy of urea hydrolysis catalyzed by soy bean urease, 209

Smith, Elizabeth R. B., and **Smith, Paul K.** Thermodynamic properties of solutions of amino acids and related substances. IV. The effect of increasing dipolar distance on the activities of aliphatic amino acids in aqueous solution at twenty-five degrees, 47

—. See *Smith and Smith,* 57

Smith, Paul K., and **Smith, Elizabeth R. B.** Thermodynamic properties of solutions of amino acids and related substances. V. The activities of some hydroxy- and N-methylamino acids and proline in aqueous solution at twenty-five degrees, 57

—. See *Smith and Smith,* 47

Sobel, Albert E., Yuska, Henry, Peters, David D., and **Kramer, Benjamin.** The biochemical behavior of lead. I. Influence of calcium, phosphorus, and vitamin D on lead in blood and bone, 239

Solomon, Rebecca Z., Hald, Pauline M., and **Peters, John P.** The state of the inorganic components of human red blood cells, 723

Somogyi, Michael. See *Weichselbaum, Somogyi, and Rusk,* 343

Sperry, Warren M. See *Waelsch and Sperry,* 787

Stadie, William C., Lukens, Francis D. W., and **Zapp, John A., Jr.** The effect of insulin upon urea formation, carbohydrate synthesis, and respiration of liver of normal and diabetic animals, 393

—, **Zapp, John A., Jr.,** and **Lukens, Francis D. W.** The effect of insulin upon the ketone metabolism of normal and diabetic cats, 423

—, —, and —. The effect of insulin upon oxidations of isolated minced muscle tissue, 411

Steenbock, H. See *Schneider, Steenbock, and Platz,* 539

Stokstad, E. L. R., Manning, P. D. V., and **Rogers, R. E.** The relation between factor U and vitamin B_6, 463

Subbarow, Yellapragada. See *György, Poling, and Subbarow,* 789

T

Talbot, N. B., Butler, Allan M., and **MacLachlan, E.** The colorimetric assay of total, α-, and β-17-ketosteroids in extracts of human urine, 595

—, **Lowry, Oliver H.,** and **Astwood, E. B.** Influence of estrogen on the electrolyte pattern of the immature rat uterus, 1

Talbott, John H. See *Consolazio and Talbott,* 753

Toennies, Gerrit. Sulfonium reactions of methionine and their possible metabolic significance, 455

Tolksdorf, Sibylle. See *Jensen and Tolksdorf,* 519

Torrance, Calvin C. Diphtherial intoxication and vitamin C content of the suprarenals of guinea pigs, 575

Tragerman, L. J. See *Halliday, Deuel, Tragerman, and Ward,* 171

Troescher, E. Elizabeth, and **Norris, Earl R.** A micro blood esterase determination applied to studies of rats bearing adenocarcinoma, 553

Tucker, I. W. See *Matlack and Tucker,* 663

V

Vickery, Hubert Bradford. The determination of arginine by means of flavianic acid, 325

W

Wade, Nelson J. See *Griffith and Wade,* 627

Waelsch, Heinrich, and **Sperry, Warren M.** The composition of unsaponifiable lipids, 787

Ward, W. E. See *Halliday, Deuel, Tragerman, and Ward,* 171

Weichselbaum, T. E., Somogyi, Michael, and **Rusk, Howard A.** A method for the determination of small amounts of potassium, 343

Weissberger, Louise Harris. The increase in phospholipid and total phosphorus metabolism of the kidney following the administration of ammonium chloride, with radioactive phosphorus as an indicator, 219

West, Edward S., Christensen, Bert E., and **Rinehart, Robert E.** A micromethod for the determination of carbon dioxide in blood and other fluids, 681

Wheeler, D. H., Riemenschneider, R. W., and **Sando, Charles E.** Preparation, properties, and thiocyanogen absorption of triolein and trilinolein, 687

White, Abraham, and **Lavin, G. I.** The ultraviolet absorption spectrum of prolactin, 717

Wick, Arne N. See *MacKay, Wick, and Carne,* 613

Wilhelmi, A. E. See *Fisher and Wilhelmi,* 135

Wintersteiner, O. See *Pearlman and Wintersteiner,* 605

Woolley, Jean Rea. See *Greengard and Woolley,* 83

Y

Yuska, Henry. See *Sobel, Yuska, Peters, and Kramer,* 239

Z

Zapp, John A., Jr. See *Stadie, Lukens, and Zapp,* 393

—. See *Stadie, Zapp, and Lukens,* 411, 423

INDEX TO SUBJECTS

A

Acetic acid: Iodo-, egg albumin, denatured, and, reaction, *Rosner,* 657

Acetone bodies: Utilization, *Nelson, Grayman, and Mirsky,* 711

—, adrenalectomy influence, *Nelson, Grayman, and Mirksy,* 711

Achromotrichia: Nutritional, curative factor, *György, Poling, and Subbarow,* 789

Acrodynia: Fatty acids, essential, effect, *Schneider, Steenbock, and Platz* 539

Vitamin B_6 effect, *Schneider, Steenbock, and Platz,* 539

Adenocarcinoma: Blood esterase determination, micro-, *Troescher and Norris,* 553

See also Cancer, Tumor

Adrenal(s): Base, new, *Pfiffner and North,* 461

Choline esterase, *Antopol and Glick,* 669

Vitamin C, diphtherial intoxication, relation, *Torrance,* 575

Adrenalectomy: Acetone body utilization, influence, *Nelson, Grayman, and Mirsky,* 711

Aerogenes: Bacteria, sugars, rare, fermentation, *Field and Poe,* 473

Colon bacteria and, *d*-fucose fermentation, *Field and Poe,* 473

Age: Central nervous system phospholipid metabolism, influence, radioactive phosphorus as indicator, *Fries, Changus, and Chaikoff,* 23

Alanine: *dl*-, liver glycogen deposition, effect, *MacKay, Wick, and Carne,* 613

Albumin: Egg. *See* Egg albumin

Alcohol: Protein, purified, animal, effect, *Harris and Mattill,* 477

Amino acid(s): Aliphatic, activity, aqueous solution, dipolar distance effect, *Smith and Smith,* 47

Hydroxy-, activity, aqueous solution, *Smith and Smith,* 57

N-Methyl-, activity, aqueous solution, *Smith and Smith,* 57

Racemization, acetylation with ketene, *Cahill and Burton,* 161

Solutions, thermodynamic properties, *Smith and Smith,* 47, 57

Aminoethylphosphate: Hydrolysis, feces phosphatase, *Bowers, Outhouse, and Forbes,* 675

—, kidney phosphatase, *Bowers, Outhouse, and Forbes,* 675

Amino nitrogen: Determination, nitrous acid use, iodine and mercury effect, *Kendrick and Hanke,* 739

Ammonium chloride: Kidney phospholipid metabolism, effect, radioactive phosphorus as indicator, *Weissberger,* 219

— phosphorus, total, metabolism, effect, radioactive phosphorus as indicator, *Weissberger,* 219

Amylase: Pancreas, solubility, organic solvents, *Larsen and Poe,* 129

Androsterone: Etioallocholan-3,17-dione conversion, *Dorfman,* 457

Anemia: Vitamin deficiency relation, chick, *Hogan and Parrott*, 507
Anhydrase: Carbonic, activity, *Kiese and Hastings*, 281
Apparatus: Drying and extraction, biological materials, *Kaye, Leibner, and Connor*, 195
Arginine: Determination, flavianic acid use, *Vickery*, 325
Ornithine conversion, *Clutton, Schoenheimer, and Rittenberg*, 227

B

Bacillus: Soil. *See* Soil bacillus
Bacteria: Colon. *See* Colon bacteria
Base(s): Total, biological material, determination, electrodialysis, *Consolazio and Talbott*, 753
Bean: Soy, urease, urea hydrolysis, activation energy, *Sizer*, 209
Benzene: *p*-Bromo-, selenium excretion, administration effect, *Moxon, Schaefer, Lardy, DuBois, and Olson*, 785
Biological material: Base, total, determination, electrodialysis, *Consolazio and Talbott*, 753
Blood: Carbon dioxide determination, micro-, *West, Christensen, and Rinehart*, 681
Cocarboxylase, vitamin B_1 deficiency determination, relation, *Goodhart and Sinclair*, 11
Esterase, determination, micro-, adenocarcinoma, *Troescher and Norris*, 553
Lead, calcium, phosphorus, and vitamin D influence, *Sobel, Yuska, Peters, and Kramer*, 239
Purine nucleoside determination, *Kerr*, 147
— nucleotide determination, *Kerr*, 147
Blood—*continued:*
Vitamin A, visual test relation, *Pett and LePage*, 585
Blood cell(s): Red, inorganic components, *Solomon, Hald, and Peters*, 723
Blood serum: Particles, microscopic, electrophoresis, *Moyer and Moyer*, 373
Bone: Lead, calcium, phosphorus, and vitamin D influence, *Sobel, Yuska, Peters, and Kramer*, 239
Bromobenzene: *p*-, selenium excretion, administration effect, *Moxon, Schaefer, Lardy, DuBois, and Olson*, 785

C

Calcium: Blood lead, influence, *Sobel, Yuska, Peters, and Kramer*, 239
Bone lead, influence, *Sobel, Yuska, Peters, and Kramer*, 239
Cancer: Tissue, glutamic acid, optical forms, *Johnson*, 781
See also Adenocarcinoma, Tumor
Carbohydrate: Kidney, nephritic, synthesis, *Lyman and Barron*, 293
Liver, normal and diabetic, synthesis, insulin effect, *Stadie, Lukens, and Zapp*, 393
Carbon dioxide: Blood, determination, micro-, *West, Christensen, and Rinehart*, 681
Body fluids, determination, micro-, *West, Christensen, and Rinehart*, 681
Hydration, catalytic, *Kiese and Hastings*, 267
Carbonic anhydrase: Activity, *Kiese and Hastings*, 281
Carboxylase: Co-, blood, vitamin B_1 deficiency determination, relation, *Goodhart and Sinclair*, 11

Carcinoma: *See also* Adenocarcinoma
Carotene: Determination, colorimetric, *Koehn and Sherman*, 527
Casein: Gelatin and egg albumin interaction at surfaces, *Moyer and Moyer*, 357
Catalase: Activity, multilayers, *Harkins, Fourt, and Fourt*, 111
Immunochemistry, *Harkins, Fourt, and Fourt*, 111
Central nervous system: Phospholipid metabolism, age influence, radioactive phosphorus as indicator, *Fries, Changus, and Chaikoff*, 23
Cerebroside: Glucose-containing, spleen, isolation, *Halliday, Deuel, Tragerman, and Ward*, 171
Chlorophyll: Preparations, purity, *Mackinney*, 91
Cholan-3,17-dione: Etioallo-, androsterone, conversion, *Dorfman*, 457
Cholesterol: Hemorrhagic degeneration, effect, *Griffith*, 639
Muscle, inheritance and exercise effect, *Bloor*, 77
Choline: Esterase, adrenal, *Antopol and Glick*, 669
Hemorrhagic degeneration, relation, *Griffith and Wade*, 627
Metabolism, *Griffith and Wade*, 627
Griffith, 639
Chromatophorotropic hormone: Crustacean eyestalk, *Abramowitz*, 501
Cocarboxylase: Blood, vitamin B_1 deficiency determination, relation, *Goodhart and Sinclair*, 11
Colon: Bacteria and *aerogenes*, *d*-fucose fermentation, *Field and Poe*, 473
—, sugars, rare, fermentation, *Field and Poe*, 473
Creatine: Liver, formation, glycocyamine relation, *Borsook and Dubnoff*, 559
Metabolism, *Baker and Miller*, 233
Muscle, *Myers and Mangun*, 701
Synthesis, glycine relation, *Fisher and Wilhelmi*, 135
—, urea relation, *Fisher and Wilhelmi*, 135
Tissue, formation, rat, *Baker and Miller*, 233
Creatinine: Metabolism, *Baker and Miller*, 233
Crustacea: Eyestalk, chromatophorotropic hormone, *Abramowitz*, 501
Cystine: Hemorrhagic degeneration, effect, *Griffith and Wade*, 627
Griffith, 639

D

Diabetes: Ketone metabolism, insulin effect, *Stadie, Zapp, and Lukens*, 423
Liver respiration, insulin effect, *Stadie, Lukens, and Zapp*, 393
— urea formation and carbohydrate synthesis, insulin effect, *Stadie, Lukens, and Zapp*, 393
Digitonide(s): Splitting, *Bergmann*, 471
Dipeptide(s): Racemization, acetylation with ketene, *Cahill and Burton*, 161
Diphtheria: Intoxication, vitamin C, suprarenals, relation, *Torrance*, 575
Drying: Biological materials, apparatus, *Kaye, Leibner, and Connor*, 195

E

Egg albumin: Denatured, iodoacetic acid and, reaction, *Rosner*, 657

Egg albumin—*continued:*
Gelatin and casein interaction at surfaces, *Moyer and Moyer,* 357
Molecular weight, *Bernhart,* 189
Electrokinetics: Surface chemistry, *Moyer and Moyer,* 357, 373
Electrolyte(s): Kidney, normal and hydronephrotic, *Eichelberger and Bibler,* 645
Uterus, estrogenic substance influence, *Talbot, Lowry, and Astwood,* 1
Enzyme(s): Pituitary, follicle-stimulating activity, relation, *McShan and Meyer,* 783
Proteolytic, tumors, *Fruton, Irving, and Bergmann,* 465
See also Amylase, Anhydrase, Catalase, Cocarboxylase, Esterase, Phosphatase, Urease
Equilin: Δ_6-Iso-, from 7-hydroxyestrone, *Pearlman and Wintersteiner,* 605
Erythrocyte: *See* Blood cell, red
Esterase: Blood, determination, micro-, adenocarcinoma, *Troescher and Norris,* 553
Choline, adrenal, *Antopol and Glick,* 669
Muscle, *Matlack and Tucker,* 663
Estrogenic substance(s): Oxygen in Ring B, *Pearlman and Wintersteiner,* 605
Uterus electrolytes, influence, *Talbot, Lowry, and Astwood,* 1
Estrone: 7-Hydroxy-, Δ_6-isoequilin from, *Pearlman and Wintersteiner,* 605
Etioallocholan-3,17-dione: Androsterone, conversion, *Dorfman,* 457
Exercise: Muscle phospholipid and cholesterol, inheritance and, effect, *Bloor,* 77
Extraction: Biological materials, apparatus, *Kaye, Leibner, and Connor,* 195
Eyestalk: Crustacean, chromatophorotropic hormone, *Abramowitz,* 501

F

Factor U: Vitamin B_6, relation, *Stokstad, Manning, and Rogers,* 463
Factor W: Pantothenic acid relation, *Black, Frost, and Elvehjem* 65
Vitamin B_6 relation, *Black, Frost, and Elvehjem,* 65
Fat: Body, vitamin B_6 effect, *Gavin and McHenry,* 41
Hemorrhagic degeneration, effect, *Griffith,* 639
Liver, vitamin B_6 effect, *Gavin and McHenry,* 41
Metabolism, vitamins B and, *Gavin and McHenry,* 41
Neutral, feces, drying and extraction apparatus, *Kaye, Leibner, and Connor,* 195
Fatty acid(s): Essential, acrodynia, effect, *Schneider, Steenbock, and Platz,* 539
Feces: Fat, neutral, drying and extraction apparatus, *Kaye, Leibner, and Connor,* 195
Phosphatase, aminoethylphosphate hydrolysis by, *Bowers, Outhouse, and Forbes,* 675
—, β-glycerophosphate hydrolysis by, *Bowers, Outhouse, and Forbes,* 675
—, preparation and effect, *Chen, Freeman, and Ivy,* 445
Flavianic acid: Arginine determination, use, *Vickery,* 325
Pituitary hormone, anterior, follicle-stimulating, effect, *Jensen and Tolksdorf,* 519

Follicle-stimulating activity: Pituitary, enzyme relation, *McShan and Meyer*, 783
Follicle-stimulating hormone: Pituitary, anterior, picric and flavianic acids, effect, *Jensen and Tolksdorf*, 519
Fucose: *d*-, fermentation, colon and *aerogenes* bacteria, *Field and Poe*, 473

G

Gaucher's disease: Spleen cerebroside, glucose-containing, relation, *Halliday, Deuel, Tragerman, and Ward*, 171
Gelatin: Casein and egg albumin interaction at surfaces, *Moyer and Moyer*, 357
Glucose: -Containing cerebroside, spleen, isolation, *Halliday, Deuel, Tragerman, and Ward*, 171
Liver glycogen deposition, effect, *MacKay, Wick, and Carne*, 613
Glutamic acid: Optical forms, normal and cancer tissue, *Johnson*, 781
Glycerophosphate: β-, hydrolysis, feces phosphatase, *Bowers, Outhouse, and Forbes*, 675
—, —, kidney phosphatase, *Bowers, Outhouse, and Forbes*, 675
Glycine: Creatine synthesis, relation, *Fisher and Wilhelmi*, 135
Liver glycogen deposition, effect, *MacKay, Wick, and Carne*, 613
Glycocyamine: Liver creatine formation, relation, *Borsook and Dubnoff*, 559
Glycogen: Liver, deposition, *dl*-alanine effect, *MacKay, Wick, and Carne*, 613
—, —, glucose effect, *MacKay, Wick, and Carne*, 613
—, —, glycine effect, *MacKay, Wick, and Carne*, 613
Gonadotropic extract(s): Picrate, *Bischoff*, 35
Picronolate, *Bischoff*, 35

H

Heme(s): Hemoglobin, acid groups, structure, *Coryell and Pauling*, 769
— derivatives, acid groups, structure, *Coryell and Pauling*, 769
Hemoglobin: Derivatives, heme acid groups, structure, *Coryell and Pauling*, 769
Heme acid groups, structure, *Coryell and Pauling*, 769
Hemorrhage: Anti-, vitamin K_1 and 2-methyl-1,4-naphthoquinone, comparison, *Emmett, Brown, and Kamm*, 467
Cholesterol effect, *Griffith*, 639
Choline, cystine, and methionine, interrelationship, *Griffith and Wade*, 627
Cystine effect, *Griffith*, 639
Fat effect, *Griffith*, 639
Hippuric acid: Synthesis, biological, *in vitro*, *Borsook and Dubnoff*, 307
Hydronephrosis: Water and electrolytes, *Eichelberger and Bibler*, 645
Hydroxyamino acid(s): Activity, aqueous solution, *Smith and Smith*, 57
Hydroxyestrone: 7-, Δ_6-isoequilin from, *Pearlman and Wintersteiner*, 605
Hydroxyprogesterone: 17-β-, *Pfiffner and North*, 459

I

Inheritance: Muscle phospholipid and cholesterol, exercise and, effect, *Bloor*, 77
Inorganic component(s): Blood cell, red, *Solomon, Hald, and Peters*, 723

Insulin: Ketone metabolism, normal and diabetic cats, *Stadie, Zapp, and Lukens,* 423
Liver carbohydrate synthesis, normal and diabetic, effect, *Stadie, Lukens, and Zapp,* 393
— respiration, normal and diabetic, effect, *Stadie, Lukens, and Zapp,* 393
— urea formation, normal and diabetic, effect, *Stadie, Lukens, and Zapp,* 393
Muscle oxidations, effect, *Stadie, Zapp, and Lukens,* 411
Iodine: Amino nitrogen determination, nitrous acid use, effect, *Kendrick and Hanke,* 739
Iodoacetic acid: Egg albumin, denatured, and, reaction, *Rosner,* 657
Isoequilin: Δ_6-, from 7-hydroxyestrone, *Pearlman and Wintersteiner,* 605

K

Ketene: Amino acid racemization, acetylation with, *Cahill and Burton,* 161
Dipeptide racemization, acetylation with, *Cahill and Burton,* 161
Ketone: Metabolism, insulin effect, normal and diabetic cats, *Stadie Zapp, and Lukens,* 423
Ketosteroid(s): 17-, total, urine, determination, colorimetric, *Talbot, Butler, and MacLachlan,* 595
α-17-, urine, determination, colorimetric, *Talbot, Butler, and MacLachlan,* 595
β-17-, urine, determination, colorimetric, *Talbot, Butler, and MacLachlan,* 595
Kidney: Electrolytes, normal and hydronephrotic, *Eichelberger and Bibler,* 645
Kidney—*continued:*
Nephritis, oxidations and carbohydrate synthesis, *Lyman and Barron,* 293
Phosphatase, aminoethylphosphate hydrolysis by, *Bowers, Outhouse, and Forbes,* 675
—, β-glycerophosphate hydrolysis by, *Bowers, Outhouse, and Forbes,* 675
Phospholipid metabolism, ammonium chloride effect, radioactive phosphorus as indicator, *Weissberger,* 219
Phosphorus, total, metabolism, ammonium chloride effect, radioactive phosphorus as indicator, *Weissberger,* 219
Water, normal and hydronephrotic, *Eichelberger and Bibler,* 645
Kjeldahl method: Micro-, rapid, *Keys,* 181

L

Lead: Biochemistry, *Sobel, Yuska, Peters, and Kramer,* 239
Blood, calcium, phosphorus, and vitamin D influence, *Sobel, Yuska, Peters, and Kramer,* 239
Bone, calcium, phosphorus, and vitamin D influence, *Sobel, Yuska, Peters, and Kramer,* 239
Linolein: Tri-, preparation and properties, *Wheeler, Riemenschneider, and Sando,* 687
—, thiocyanogen absorption, *Wheeler, Riemenschneider, and Sando,* 687
Lipid(s): Unsaponifiable, composition, *Waelsch and Sperry,* 787
Liver: Carbohydrate synthesis, normal and diabetic, *Stadie, Lukens, and Zapp,* 393

Liver—*continued:*
Creatine formation, glycocyamine relation, *Borsook and Dubnoff,* 559
Fat, vitamin B_6 effect, *Gavin and McHenry,* 41
Glycogen deposition, *dl*-alanine effect, *MacKay, Wick, and Carne,* 613
— —, glucose effect, *MacKay, Wick, and Carne,* 613
— —, glycine effect, *MacKay, Wick, and Carne,* 613
Respiration, normal and diabetic, insulin effect, *Stadie, Lukens, and Zapp,* 393
Urea formation, normal and diabetic, insulin effect, *Stadie, Lukens, and Zapp,* 393

M

Manganous uranyl acetate: Sodium determination, colorimetric, micro-, use, *Leva,* 487

Mercury: Amino nitrogen determination, nitrous acid use, effect, *Kendrick and Hanke,* 739

Metabolism: Methionine sulfonium reactions, relation, *Toennies,* 455

Methionine: Hemorrhagic degeneration, relation, *Griffith and Wade,* 627
Sulfonium reactions, metabolic significance, *Toennies,* 455

Methylamino acid(s): N-, activity, aqueous solution, *Smith and Smith,* 57

Methyl-1,4-naphthoquinone: 2-, vitamin K_1, antihemorrhagic activity, comparison, *Emmett, Brown, and Kamm,* 467

Muscle: Cholesterol, inheritance and exercise effect, *Bloor,* 77
Creatine, *Myers and Mangun,* 701

Muscle—*continued:*
Esterase, *Matlack and Tucker,* 663
Oxidation, insulin effect, *Stadie, Zapp, and Lukens,* 411
Phospholipid, inheritance and exercise effect, *Bloor,* 77
Phosphorus, *Myers and Mangun,* 701
Potassium, *Myers and Mangun,* 701

N

Naphthoquinone: 2-Methyl-1,4-, vitamin K_1, antihemorrhagic activity, comparison, *Emmett, Brown, and Kamm,* 467

Nephritis: Kidney oxidations and carbohydrate synthesis, *Lyman and Barron,* 293

Nitrogen: Amino. *See* Amino nitrogen
Determination. *See also* Kjeldahl method

Nucleoside(s): Purine, blood, determination, *Kerr,* 147
—, tissues, determination, *Kerr,* 147

Nucleotide(s): Purine, blood, determination, *Kerr,* 147
—, tissues, determination, *Kerr,* 147

O

Olein: Tri-, preparation and properties, *Wheeler, Riemenschneider, and Sando,* 687
—, thiocyanogen absorption, *Wheeler, Riemenschneider, and Sando,* 687

Ornithine: Arginine, conversion, *Clutton, Schoenheimer, and Rittenberg,* 227

Oxidation(s): Biological, *Lyman and Barron,* 293
Kidney, nephritic, *Lyman and Barron,* 293

P

Pancreas: Amylase, solubility, organic solvents, *Larsen and Poe*, 129

Pantothenic acid: Factor W, relation, *Black, Frost, and Elvehjem*, 65

Peptide(s): Di-, racemization, acetylation with ketene, *Cahill and Burton*, 161

Phosphatase: Feces, aminoethylphosphate hydrolysis by, *Bowers, Outhouse, and Forbes*, 675

—, β-glycerophosphate hydrolysis by, *Bowers, Outhouse, and Forbes*, 675

—, preparation and effect, *Chen, Freeman, and Ivy*, 445

Kidney, aminoethylphosphate hydrolysis by, *Bowers, Outhouse, and Forbes*, 675

—, β-glycerophosphate hydrolysis by, *Bowers, Outhouse, and Forbes*, 675

Phospholipid(s): Metabolism, central nervous system, age influence, radioactive phosphorus as indicator, *Fries, Changus, and Chaikoff*, 23

—, kidney, ammonium chloride effect, radioactive phosphorus as indicator, *Weissberger*, 219

—, radioactive phosphorus as indicator, *Fries, Changus, and Chaikoff*, 23

Muscle, inheritance and exercise effect, *Bloor*, 77

Phosphorus: Blood lead, influence, *Sobel, Yuska, Peters, and Kramer*, 239

Bone lead, influence, *Sobel, Yuska, Peters, and Kramer*, 239

Muscle, *Myers and Mangun*, 701

Phosphorus—*continued:*

Radioactive, central nervous system phospholipid metabolism indicator, age influence, *Fries, Changus, and Chaikoff*, 23

—, kidney phospholipid metabolism, ammonium chloride effect, indicator, *Weissberger*, 219

—, — phosphorus, total, metabolism, ammonium chloride effect, indicator, *Weissberger*, 219

—, phospholipid metabolism indicator, *Fries, Changus, and Chaikoff*, 23

Picric acid: Pituitary hormone, anterior, follicle-stimulating, effect, *Jensen and Tolksdorf*, 519

Pituitary: Anterior, follicle-stimulating hormone, picric and flavianic acids, effect, *Jensen and Tolksdorf*, 519

—. *See also* Prolactin

Follicle-stimulating activity, enzyme relation, *McShan and Meyer*, 783

Polysulfide: Sulfur-, colloidal, mixture, absorption and oxidation, *Greengard and Woolley*, 83

Potassium: Determination, micro-, *Weichselbaum, Somogyi, and Rusk*, 343

Muscle, *Myers and Mangun*, 701

Progesterone: 17-β-Hydroxy-, *Pfiffner and North*, 459

Prolactin: Absorption spectrum, *White and Lavin*, 717

Proline: Activity, aqueous solution, *Smith and Smith*, 57

Protein(s): Animal, purified, alcohol effect, *Harris and Mattill*, 477

Metabolism, *Clutton, Schoenheimer, and Rittenberg*, 227

Proteolysis: Enzymes, tumors, *Fruton, Irving, and Bergmann,* 465

Purine: Nucleosides, blood, determination, *Kerr,* 147
—, tissues, determination, *Kerr,* 147
Nucleotides, blood, determination, *Kerr,* 147
—, tissues, determination, *Kerr,* 147

S

Selenium: Excretion, *p*-bromobenzene effect, *Moxon, Schaefer, Lardy, DuBois, and Olson,* 785

Sodium: Determination, colorimetric, micro-, manganous uranyl acetate use, *Leva,* 487

Soil bacillus: Bactericidal agent, fractionation, *Hotchkiss and Dubos,* 791
— substances, properties, *Hotchkiss and Dubos,* 793

Soy bean: *See* Bean

Spleen: Cerebroside, glucose-containing, isolation, *Halliday, Deuel, Tragerman, and Ward,* 171

Steroid(s): 17-Keto-, total, α-, and β-, urine, determination, colorimetric, *Talbot, Butler, and MacLachlan,* 595

Sugar(s): Fermentation, colon and *aerogenes* bacteria, *Field and Poe,* 473

Sulfonium reaction(s): Methionine, metabolic significance, *Toennies,* 455

Sulfur: -Polysulfide mixture, colloidal, absorption and oxidation, *Greengard and Woolley,* 83

Suprarenal: *See* Adrenal

T

Thiocyanogen: Absorption, triolein and trilinolein, *Wheeler, Riemenschneider, and Sando,* 687

Tissue(s): Purine nucleoside determination, *Kerr,* 147
— nucleotide determination, *Kerr,* 147

Trilinolein: Preparation and properties, *Wheeler, Riemenschneider, and Sando,* 687
Thiocyanogen absorption, *Wheeler, Riemenschneider, and Sando,* 687

Triolein: Preparation and properties, *Wheeler, Riemenschneider, and Sando,* 687
Thiocyanogen absorption, *Wheeler, Riemenschneider, and Sando,* 687

Tryptophane: Determination, methods, comparison, *Shaw and McFarlane,* 387

Tumor(s): Enzymes, proteolytic, *Fruton, Irving, and Bergmann,* 465

See also Adenocarcinoma

U

Urea: Creatine synthesis, relation, *Fisher and Wilhelmi,* 135
Liver, formation, normal and diabetic, insulin effect, *Stadie, Lukens, and Zapp,* 393
Soy bean urease, hydrolysis, activation energy, *Sizer,* 209

Urease: Soy bean, urea hydrolysis, activation energy, *Sizer,* 209

Urine: 17-Ketosteroids, total, α-, and β-, determination, colorimetric, *Talbot, Butler, and MacLachlan,* 595

Uterus: Electrolytes, estrogenic substance influence, *Talbot, Lowry, and Astwood,* 1

V

van den Bergh reaction: Chemistry, *Coolidge,* 119

Vitamin: A, blood, visual test relation, *Pett and LePage,* 585

—, deficiency, *Pett and LePage,* 585

—, determination, colorimetric, *Koehn and Sherman,* 527

A_2, cyclization, *Embree and Shantz,* 619

B, fat metabolism and, *Gavin and McHenry,* 41

B_1 deficiency, determination, blood cocarboxylase relation, *Goodhart and Sinclair,* 11

B_6, acrodynia, effect, *Schneider, Steenbock, and Platz,* 539

—, body fat, effect, *Gavin and McHenry,* 41

—, factor U, relation, *Stokstad, Manning, and Rogers,* 463

—, — W, relation, *Black, Frost, and Elvehjem,* 65

Vitamin—*continued:*

B_6, liver fat, effect, *Gavin and McHenry,* 41

C, suprarenals, diphtherial intoxication, relation, *Torrance,* 575

D, blood lead, influence, *Sobel, Yuska, Peters, and Kramer,* 239

—, bone lead, influence, *Sobel, Yuska, Peters, and Kramer,* 239

Deficiency, anemia relation, chick, *Hogan and Parrott,* 507

K_1, 2-methyl-1,4-naphthoquinone, antihemorrhagic activity, comparison, *Emmett, Brown, and Kamm,* 467

—, synthesis, *Klose and Almquist,* 469

W

Water: Kidney, normal and hydronephrotic, *Eichelberger and Bibler,* 645

Work: *See also* Exercise